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REMARKS

Claims 1-30 are pending in the present Application. Claims 3, 6, 7, 16, 19, 20, 29 and 30 have been canceled, Claims 1, 2, 5, 8, 9, 11, 12-15, 18, 21, 22, and 24 – 26 have been amended, and new Claims 31 – 38 have been added, leaving Claims 1, 2, 4, 5, 8 – 15, 17, 18, 21 - 28 and 31 – 38 for consideration upon entry of the present Amendment. No new matter has been introduced by these amendments. The Applicants respectfully request reconsideration and allowance of the claims in view of the above amendments and the following remarks.

Drawings objected to under 37 CFR 1.83(a)

The drawings have been objected to by the Examiner alleging that they do not show every feature of the invention specified in the claims. In particular, the pseudo-randomized prism structure is alleged not to be shown in the drawings. The Applicants have cancelled Claim 30 rendering this objection moot.

Specification objected to for informalities

The Examiner has objected to the specification stating that the specification does not disclose a pseudo-randomized prism structure, claimed in claim 30. Claim 30 has been cancelled rendering this objection moot as well.

Amendments to the specification

Paragraph [0030] of the specification has been amended to include the sentence "[i]n another embodiment, the light diffusing particles of the bulk light diffuser material are present in an amount of about 2.2% to about 2.5%." Support for the amendment may be found at least in Claim 22 as originally filed.

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Amendments to the Claims

Claims 1 and 14 have been amended to better define the invention.

Claims 2, 5, 8, 9, 11, 12-15, 18, 21, 22, and 24 – 26 have been amended to create a proper antecedent basis for these claims. Support for these amendments is detailed in the following table.

Amended Claim	Support can be found in at least
1	Paragraph [0023] on page 5
2, 5, 8,11, 15 and 18	Claims as originally filed
9	Paragraph [0030] on page 7
12	Paragraph [0027] on page 6
13	Paragraph [0027] on page 6
14	Paragraph [0023] on page 5
22	Paragraph [0030] on page 7
25 - 26	Paragraph [0027] on page 6

New Claims Added

New Claims 31 – 39 have been added to the application. Support for these new claims is detailed in the following table.

New Claim	Support can be found in at least
31	Claims as originally filed and paragraph [0027] on page 6
32, 33, 34, 36, 37 and 38	Claims as originally filed
35	Claims as originally filed and paragraph [0027] on page 6

Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 2, 3, 6, 7, 15, 19 and 20 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. (Office Action dated 03/17/04, page

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2) In particular, the examiner has stated that claims 2, 3, 6, 7, 15, 19 and 20 are indefinite in that they disclose a group of elements and it is not clear whether the diffuser material has one or all of them. (Office Action dated 03/17/04, pages 2 and 3)

In the first instance, it is submitted that Claims 3, 6, 7, 19 and 20 have been cancelled thereby rendering this rejection moot.

Claims 2 and 15 contain either the term "comprise" as functional language. These terms also contain the term "or mixtures thereof". The Applicants contend that the use of such language is appropriate and is not indefinite as suggested by the Examiner. For example, MPEP section 2173.05(h) teaches that use of limitation "wherein R is A, B, C or D" is considered proper. The courts have held that [a]lternative expressions using "or" are acceptable, such as "wherein R is A, B, C, or D." The following phrases were each held to be acceptable and not in violation of 35 U.S.C. 112, second paragraph in *In re Gaubert*, 524 F.2d 1222, 187 USPQ 664 (CCPA 1975): "made entirely or in part of"; "at least one piece"; and "iron, steel or any other magnetic material." The use of the term "or" in the Claims 2, 6, 15, 19 and 20 clearly indicates that either one of the elements described in the claim or mixtures thereof can be used in the bulk diffuser material. Applicants respectfully request a withdrawal of the rejection from under 35 U.S.C. § 112, second paragraph, and an allowance of the claims.

With regard to Claims 2, 3, 15, and 16, the Examiner has stated that the phrase "the alkyl groups" is indefinite because they do not apply to at least silicone, zinc, antimony, titanium and barium.

Claims 3 and 16 have been cancelled thereby rendering this rejection moot.

Claims 2 and 15 have been amended to specifically list which elements have alkyl groups containing 1 to about 12 carbon atoms. Applicants respectfully request a withdrawal of the rejection from under 35 U.S.C. § 112, second paragraph, and an allowance of the claims.

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Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1, 6, 7, 14, 19, 20 and 27-29 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,394,255 to Yokota et al., (hereinafter "Yokota"), in view of U.S. Patent Application No. 2001/0022997 to Honda et al., (hereinafter "Honda"). (Office Action dated 03/17/2004, pages 3-4) Applicants respectfully disagree.

The application as presently amended is directed at a bulk light diffuser material comprising about 95 to about 99.8 percent by weight of a polycarbonate and about 0.2 to about 5 percent by weight of light diffusing particles, based on the total weight of the polycarbonate and of the light diffusing particles, wherein the light diffusing particles have a refractive index of 1.43 to 1.49; and wherein the bulk light diffuser material has a percent transmittance of at least 70% and a haze of at least 10% measured according to ASTM standard D 1003-00. (Claim 1)

The application as presently amended is also directed at a bulk light diffuser material comprising about 95 to about 99.8 percent by weight of a polycarbonate and about 0.2 to about 5 percent by weight of light diffusing particles, based on the total weight of the polycarbonate and of the light diffusing particles, wherein the difference between the refractive index of the polycarbonate and the refractive index of the light diffusing particles is about 0.1 to about 0.16; and wherein the bulk light diffuser material has a percent transmittance of at least 70% and a haze of at least 10% measured according to ASTM standard D 1003-00. (Claim 31)

The application as presently amended is also directed at a bulk light diffuser material comprising about 95 to about 99.8 percent by weight of a polycarbonate and about 0.2 to about 5 percent by weight of light diffusing particles, based on the total weight of the polycarbonate and of the light diffusing particles; wherein the light diffusing particles comprise poly(methyl methacrylate), hydrolyzed poly(alkyl trialkoxysilane) or combinations thereof; and wherein the bulk light diffuser material has a percent transmittance of at least 70% and a haze of at least 10% measured according to ASTM standard D 1003-00. (Claim 34)

The application is also directed at devices comprising the light diffuser materials of Claims 1, 31 and 34.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied

upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was make. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

In the first instance Claims 6, 7, 19, 20 and 29 are cancelled, thereby rendering this rejection moot as applied to these particular claims.

Yokota teaches a planar lighting device that includes two light adjusting sheets stacked together wherein each light adjusting sheet includes a plurality of convex and concave streaks arranged alternately and approximately parallel to each other on one surface. (see Abstract). In particular, Yokota teaches a light diffusing sheet that may contain a light diffusing material, where the light diffusing material can be white pigments such as calcium carbonate powder, titanium oxide powder, and zinc white, white inorganic powder such as alumina powder, silica powder and white clay, glass beads, glass fiber, and synthetic resin powder with a refractive index different from that of the light adjusting sheet, (see Col. 8, lines 1-10).

All of the white pigment particles taught by Yokota have high refractive indexes greater than or equal to 1.5. For example, titanium dioxide (that is cited by the Examiner) has a refractive index of 2.79. Thus, the difference between the refractive index of the polycarbonate and the white pigment particles taught by Toyota have differences that are greater than 0.16. Yokota does not teach a refractive index for the synthetic resin powder and further does not teach that inclusion of these resin powder particles in polycarbonate will produce a bulk light diffuser material that has a percent transmittance of at least 70% and a haze of at least 10% measured according to ASTM standard D 1003-00. The present application, in contrast, is directed at particles having a refractive index of 1.43 to 1.49 which when dispersed in polycarbonate produces a bulk light diffuser material that has a percent transmittance of at least 70% and a haze of at least 10% measured according to ASTM standard D 1003-00. Yokota therefore does not teach all elements of the claimed invention.

Honda teaches a transflective polarizer comprising a dichroic polarizer, a reflective polarizer and a transflector, wherein a transmission axis of the dichroic polarizer and a transmission axis of the reflective polarizer are directed to the same direction, which can give a transflective liquid crystal display having higher transmission brilliance (see Abstract). In particular, Honda teaches a diffusion sheet that may be made of a plastic sheet such as polycarbonate. (see paragraph [0051]) Honda teaches that the diffusion sheet may be an optical element having a transmittance of about 60% or more and a haze value of 10% or more. (see paragraph [0050]) Honda teaches that particles may be added into an inner portion of the diffusion sheet. (see paragraph [0051]) Honda does not, however, teach what particles may be included into the inner portion of the sheet. More specifically, Honda does not teach particles that have a refractive index of 1.43 to 1.49 as is presently claimed. Honda therefore like Yokota does not teach all elements of the claimed invention. More specifically, Honda does not make up for the deficiency of Yokota. Thus the combination of Yokota with Honda does not teach all elements of the claimed invention.

In addition, there is no motivation to combine Yokota with Honda. There are no teachings, either explicit or implicit in either Yokota or Honda that would compel one of ordinary skill in the art to make the combination made by the Examiner. One of ordinary skill in the art upon reading Yokota with Honda would not find any particles having a refractive index of about 1.43 to about 1.49 that could be added to the polycarbonate to produce a bulk light diffuser material that has a percent transmittance of at least 70% and a haze of at least 10%. Applicants further believe that the combination was made in hindsight using the claimed invention as a template. In this regard the courts have held that "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." *In re Mills*, 916 F.2d 680, 16 USPQ 1430 (Fed. Cir. 1990).

With regard to using the present invention as a template, the courts have held that "[i]n applying § 103, the U.S. Court of Appeals for the Federal Circuit has consistently held that one must consider both the invention and the prior art "as a whole", not from improper hindsight gained from consideration of the claimed invention." See, *Interconnect Planning Corp. v. Feil,*

227 U.S.P.Q. 543, 551 (Fed. Cir. 1985) and cases cited therein. According to the *Interconnect* court

> [n]ot only must the claimed invention as a whole be evaluated, but so also must the references as a whole, so that their teachings are applied in the context of their significance to a technician at the time - a technician without our knowledge of the solution. *Id.*

In summary, since the combination made by the Examiner does not teach all the claimed elements and since there is no motivation to combine Yokota with Honda, the Applicants respectfully request a withdrawal of the § 103 rejection and an allowance of the claims over Yokota in view of Honda.

Claims 2 and 15 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Yokota, in view of Honda and further in view of U.S. Patent No. 4,368,303 to McDaniel, (hereinafter "McDaniel"). (Office Action dated 03/17/2004, pages 4 and 5)

In making the rejection, the Examiner has stated, "McDaniel discloses the titanium wherein alkyl groups have 1 to 7 carbon atoms (Claim 18). It would have been obvious to one having ordinary skill in the art, at the time the invention was made to provide the titanium having alkyl groups, as taught by McDaniel for the diffuser material of Yokota, for the polymerization." (Office Action dated 03/17/2004, pages 4 and 5) Applicants respectfully disagree.

McDaniel teaches a silica exhibiting characteristics associated with azeotrope dried titanium-silica for use as a support for chromium catalysts. The resulting catalysts are used in polymerization of olefins, (see abstract). In particular, McDaniel teaches titanium where the alkyl groups have 1 to 7 carbon atoms. (see Claim 18). McDaniel, however, does not teach particles having a refractive index of about 1.43 to 1.49. Thus McDaniel does not make up for the deficiency of Yokota, Honda, or the combination of Yokota with Honda.

In addition, McDaniel is non-analogous art. One skilled in the art would not look to a titanium impregnated silica-chromium catalyst to be used in a bulk light diffuser material. Furthermore, there is no motivation to combine the disclosure of McDaniel with Yokota and/or Honda. In this regard, the courts have held that "[f]or the purposes of evaluating

obviousness of claimed subject matter, the particular references relied upon must constitute "analogous art". *In re Clay*, 966 F.2d 656, 659, 23 U.S.P.Q.2d 1058, 1060-61 (Fed. Cir. 1992). The art must be from the same field of endeavor, or be reasonably pertinent to the particular problem with which the inventor is involved. *Id* Since McDaniel deals with catalysts it is not from the same field of endeavor and is not remotely pertinent to the problem of light diffusion for flat panels.

Applicants further maintain that this rejection, like the rejection over Yokota in view of Honda, was made with hindsight provided derived from the claimed invention. As stated above, the courts do not view this favorably. For these reasons the Applicants request a withdrawal of the § 103 rejection over Yokota and Honda in view of McDaniel.

Claims 10, 11, 23 and 24 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Yokota, in view of Honda and further in view of U.S. Patent No. 4,152,618 to Abe et al., (hereinafter "Abe"). (Office Action dated 03/17/2004, pages 4 and 6)

In making the rejection, the Examiner has stated that "[i]t would have been obvious to one having ordinary skill in the art, at the time the invention was made to provide the a diffusing film of Abe et al. as a diffusing material for the device of Yokota et al for the purpose of diffusing the light." (Office Action dated 03/17/2004, pages 4 and 6) Applicants respectfully disagree.

Abe teaches a light-emitting display device comprising a light-emitting element, a substrate on which the light-emitting element is disposed, a reflector for reflecting the light from the light-emitting element, and a light diffusing film disposed apart from the light-emitting element for dispersing the light. (see Abstract) The light diffusing film consists of a light diffusing part of a fibriform light diffusing material and a transparent part. (see Abstract)

In particular, Abe teaches that the light diffusing material is a fiber glass, a fibriform high molecular weight compound such as Teflon, or a vegetable fiber, (see Col. 2, lines 58-68). Abe, like Yokota, Honda or McDaniel, does not light diffusing particles that have a refractive index of about 1.43 to about 1.49. Abe therefore does not make up for the deficiency of Yokota or Honda. The combination made by the Examiner would thus not

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produce the claimed invention. In addition, there is no motivation or suggestion provided in Abe to combine it with Yokota and/or Honda. The Applicants therefore respectfully request a withdrawal of the § 103 rejection over Yokota and Honda in view of Abe.

Claim 30 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Yokota, in view of Honda and further in view of U.S. Patent No. 6,208,466 to Liu et al., (hereinafter "Liu"). (Office Action dated 03/17/2004, page 6) Claim 30 has been cancelled, thus rendering the rejection of Claim 30 moot.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance are requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

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